

## **Remedial Action Contract**

**U.S. EPA Contract No.: EP-W-09-002**

### **Remedial Action – Phase 1 (Wells Installation)**

<b>Work Assignment No:</b>	<b>023-RARA-02PE</b>
	<b>Old Roosevelt Field Contaminated Groundwater Area Site</b>
<b>EPA Remedial Project Manager:</b>	<b>Caroline Kwan</b>
<b>CDM Site Manager:</b>	<b>Thomas Mathew, P.E.</b>

**Prepared for:**  
**U.S. Environmental Protection Agency**  
**Region 2**  
**290 Broadway**  
**New York, New York 10007-1866**

**Prepared by:**  
**CDM Federal Programs Corporation**  
**125 Maiden Lane, 5<sup>th</sup> Floor**  
**New York, New York**

## **Bi-Weekly Progress Report No. 2**

### **Phase 1 – Wells Installation**

#### **1.0 Introduction**

Pursuant of the Work Assignment Form (WAF) Statement of Work (SOW), for Region 2 Contract EP-W-09-002 Work Assignment 023-RARA-02PE, CDM Federal Programs Corporation (CDM) is performing the Phase 1 (Wells Installation) Remedial Action (RA) at the Old Roosevelt Contaminated Groundwater Area Site. The Bi-Weekly Progress Report is intended to partially fulfill the requirements specified under WAF SOW for this assignment. This Bi-Weekly report is prepared for the work performed from May 17 to 28, 2010.

The primary responsibility of the project geologist was to oversee all drilling and well installation activities to ensure that the work meets all requirements of the final Remedial Design specifications and is performed by the Subcontractor in accordance with all applicable quality assurance, health and safety, and regulatory requirements.

The work completed during this reporting period included installing monitoring wells MW-03S, MW-03I and MW-02S, repairing the fence around the extraction well area that fell down due to high wind, installing temporary fence at the MW-02 cluster, developing monitoring wells MW-03S and MW-03I, performing leak test of the temporary treatment system by using well development water collected from MW-03S and MW-03I, and installing 6-inch effluent pipe from the temporary treatment system to the Nassau County storm drain near Clinton Road. This work is summarized in further detail below. A list of the supporting documentation attached with this bi-weekly progress report is as follows:

- Attachment 1 - CDM's Daily Status Report
- Attachment 2 - CDM's Field Log Book notes
- Attachment 3 - Borehole log
- Attachment 4 - Chain-of-Custody forms
- Attachment 5 - Photo log

#### **2.0 Personnel On-Site**

The following personnel were on site during this reporting period:

##### **CDM - Contractor**

Thomas Mathew	Site Manager
Frank Robinson	Project Geologist

##### **Uni-Tech - Driller**

Butch Hitzelberger	Head Driller
Brad Barnes	Driller
Keith Doran	Driller

##### **Intex - Temporary Water Treatment System**

Todd Daniel  
Keith Fitzgerald  
Joe Kmiecik

##### **Long Island Analytical Laboratory**

Chris Ortiz

**Nassau County Department of Public Works**  
Michael Flaherty

### **3.0 Summary of Work Performed**

The following is a brief summary of the field activities performed during this reporting period (refer to Attachments 1, 2 and 5 for Daily Status Report, log book notes, and photo log, respectively for each working day):

- Site mobilization
  - Fencing contractor, National Rent-a-Fence, installed temporary fencing around the MW-02 well cluster, and repaired the fence around the extraction well area that fell down due to high winds.
  - Freehold Cartage delivered a 20-cubic yard (cy) roll off container for the soil cuttings generated from MW-02 cluster.
- Soil sample analysis
  - Soil samples from test borehole TB-01 were collected for analysis of total organic carbon from the same intervals as the grain size analysis samples collected during the previous reporting period. The only change were from the grain size intervals of 60 to 62 feet and 140 to 142 feet were substituted with 80-82 feet and 150 to 152 feet due to lack of sample. The samples were held and shipped on May 17, 2010 (Attachment 4).
- Installation of monitoring wells MW-03S, MW-03I and MW-02S
  - MW-03S
    - Uni-Tech drilled to 252 feet below ground surface (bgs) using mud rotary method.
    - An 8-inch diameter surface casing was installed from grade to 80 feet bgs by welding each 20 foot section together, and the casing was then tremie grouted in place with a cement bentonite grout to grade.
    - MW-03S was installed with 10 feet of 4 inch stainless steel 10 slot screen set from 234 to 244 feet with a 5 foot sump set from 244 to 249 feet and 4 inch stainless steel well casing from grade to 234 feet bgs. The well was then completed with appropriate well construction materials (gravel pack, cement/bentonite grout etc.). Details can be found in the bore logs (refer to Attachment 3).
  - MW-03I
    - Uni-Tech drilled to 322 feet bgs using mud rotary method.
    - An 8-inch diameter surface casing was installed from grade to 81 feet bgs by welding each 20 foot section together, and the casing was then tremie grouted in place with a cement bentonite grout to grade.
    - MW-03I was installed with 10 feet of 4 inch stainless steel 10 slot screen set from 304 to 314 feet with a 5 foot sump set from 314 to 319 feet and 4 inch stainless steel well casing from grade to 304 feet bgs. The well was then completed with appropriate well construction materials (gravel pack, cement/bentonite grout etc.). Details can be found in the bore logs (refer to Attachment 3).

- MW-02S
  - Uni-Tech drilled to 255 feet bgs using mud rotary method.
  - An 8-inch diameter surface casing was installed from grade to 80 feet bgs by welding each 20 foot section together, and the casing was then tremie grouted in place with a cement bentonite grout to grade.
  - MW-02S was installed with 10 feet of 4 inch stainless steel 10 slot screen set from 236 to 246 feet with a 5 foot sump set from 246 to 251 feet and 4 inch stainless steel well casing from grade to 304 feet bgs. The well was then completed with appropriate well construction materials (gravel pack, cement/bentonite grout etc.). Details can be found in the bore logs (refer to Attachment 3).
- Equipment decontamination
  - Uni-Tech decontaminated the drill rig and all associated equipment used using a pressure washer steam cleaner.
- Well development and handling of well development water
  - At MW-03S and MW-03I, Uni-Tech performed the initial development using the airlift swab method. Both wells will be completely developed using a submersible pump at later date.
  - Approximately 3,200 gallons and 2,600 gallons of well development water was pumped out of MW-03S and MW-03I, respectively. Both wells were sand free at the conclusion of the pumping.
  - All well development water was transferred to the Frac Tank in the temporary water treatment area.
  - Index performed leak test of the temporary treatment system by using well development water stored in the influent tank (first Frac Tank). The treated water was stored into the effluent tank (second Frac Tank). In addition, Intex installed 6-inch effluent pipe from the temporary water treatment facility to 30 feet short of the Nassau County storm drain near Clinton Road. The rest of the pipe will be installed when they are ready to discharge treated water to the storm drain.
- Health and Safety
  - A tailgate H&S meeting was conducted each day before the start of work activities.

#### **4.0 Problems/Corrective Action**

- Temporary fence at the extraction well area was damaged overnight on May 19th due to high winds. National Rent-a-Fence repaired all fence on May 20th.
- The mud pump failed when Uni-Tech started to drill at MW-03S. However, the repair was easily completed as this had been expected during the prior week and the parts to rebuild the pump were already delivered to the site.

#### **5.0 Deviations**

None noted for this period.



## **6.0 Conclusions**

All RA construction work was completed in general accordance with RA Subcontract Documents and approved construction submittals. Minor issues were encountered during this reporting period, all of which were addressed and resolved.

**ATTACHMENT 1**  
**DAILY STATUS REPORT**

# Daily Status Report

PROJECT: Old Roosevelt Field Site

Date: 5-17-10

Day: 11 (Monday)

WEATHER: Mostly cloudy

TEMP: 50/75

WIND: Light from the NW

<b>PERSONNEL ONSITE</b>			
CDM : Frank Robinson			
Uni-Tech: Butch Hitzelberger, Brad Barnes			
Long Island Analytical Laboratory: Chris Ortiz			
<b>VISITORS</b>			
<b>TIME</b>	<b>NAME</b>	<b>REPRESENTING</b>	<b>REMARKS</b>
<b>EQUIPMENT IN USE:</b>			
-Failing 1500 Drill rig.			
-Tender truck.			
-Support truck.			
-Deere 310E backhoe.			
<b>CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:</b>			
-A tailgate H&S meeting was conducted before the start of work activities. See below for details.			
-LI Analytical Laboratory delivered sample bottles for the TB-01 TOC (total organic carbon) samples from the same intervals as the grain size analysis samples. The driver waited while the sample bottles were filled. The only change were from the grain size intervals of 60-62 feet and 140-142 feet were substituted with 80-82 feet and 150-152 feet due to lack of sample.			
-Uni-Tech started to drill at MW-03S when the mud pump failed. This was expected last week and the parts to rebuild the pump were on hand.			
-Uni-Tech drilled down to 80 feet at MW-03S using mud rotary, first with a 8 inch bit then a 12 inch bit to install the 8 inch outer casing. The 8 inch carbon steel outer casing was then installed, welding each 20 foot section together. The 8 inch outer casing was then tremie grouted in place to grade using a cement grout.			
<b>WORK BEING INSPECTED:</b>			
-The monitoring well construction material was inspected and meets what was submitted and approved by CDM. This includes the			
<b>JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:</b>			
-Daily tailgate H&S meeting topics covered:			
Slips trips and falls: proper PPE (hardhat, safety glasses, steel toe shoes and safety vest): watch out for traffic in the parking lot when walking or moving vehicles and have a fire watch when performing hot work. Also, no smoking, drinking or eating in the exclusion zone is allowed.			

# Daily Status Report (Continued)

PROJECT: Old Roosevelt Field Site

<b>TESTING PERFORMED:</b>
<b>PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:</b> -The drill rig mud pump failed and was rebuilt on site with the parts that were on hand.
<b>GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:</b>
<b>COMMUNICATION WITH CONTRACTOR STAFF:</b>
<b>MEETING:</b>
<b>ADDITIONAL ACTIVITIES AND REMARKS:</b>

By: Frank Robinson

Title: Project Geologist

# Daily Status Report

PROJECT: Old Roosevelt Field Site

Date: 5-18-10

Day: 12 (Tuesday)

WEATHER: Rain

TEMP: 50/54

WIND: Light from the NE

<b>PERSONNEL ONSITE</b>			
CDM :	Frank Robinson		
Uni-Tech:	Butch Hitzelberger, Brad Barnes		
<b>VISITORS</b>			
<b>TIME</b>	<b>NAME</b>	<b>REPRESENTING</b>	<b>REMARKS</b>
<b>EQUIPMENT IN USE:</b>			
-Failing 1500 Drill rig.			
-Tender truck.			
-Support truck.			
-Deere 310E backhoe.			
<b>CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:</b>			
-A tailgate H&S meeting was conducted before the start of work activities. See below for details.			
-At MW-03S, Uni-Tech drilled an 8 inch borehole from 80-252 feet using mud rotary. The well was then installed with 10 feet of 4 inch stainless steel 10 slot screen set from 234-244 feet with a 5 foot sump set from 244-249 feet and 4 inch stainless steel well casing from grade to 234 feet. The #1 gravel pack was installed by tremie pipe from 226-250 feet and the bentonite/#00 sand slurry was installed by tremie pipe from 220-226 feet. The well was then grouted by tremie pipe using cement/bentonite from grade to 220 feet.			
<b>WORK BEING INSPECTED:</b>			
<b>JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:</b>			
-Daily tailgate H&S meeting topics covered:			
Slips trips and falls: proper PPE (hardhat, safety glasses, steel toe shoes and safety vest): watch out for traffic in the parking lot when walking or moving vehicles and have a fire watch when performing hot work. Also, no smoking, drinking or eating in the exclusion zone is allowed.			

# Daily Status Report (Continued)

PROJECT: Old Roosevelt Field Site

<b>TESTING PERFORMED:</b>
<b>PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:</b>
<b>GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:</b>
<b>COMMUNICATION WITH CONTRACTOR STAFF:</b>
<b>MEETING:</b>
<b>ADDITIONAL ACTIVITIES AND REMARKS:</b>

By: Frank Robinson

Title: Project Geologist

# Daily Status Report

PROJECT: Old Roosevelt Field Site

Date: 5-19-10

Day: 13 (Wednesday)

WEATHER: Overcast

TEMP: 53/68

WIND: Light from the NE

<b>PERSONNEL ONSITE</b>			
CDM :	Frank Robinson		
Uni-Tech:	Butch Hitzelberger, Brad Barnes		
<b>VISITORS</b>			
<b>TIME</b>	<b>NAME</b>	<b>REPRESENTING</b>	<b>REMARKS</b>
<b>EQUIPMENT IN USE:</b>			
-Failing 1500 Drill rig.			
-Tender truck.			
-Support truck.			
-Deere 310E backhoe.			
<b>CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:</b>			
-A tailgate H&S meeting was conducted before the start of work activities. See below for details.			
-The fence around the extraction well area fell down again overnight due to high winds. A call to National Fence was made and they will be repairing the fence tomorrow morning.			
-At MW-03I, Uni-Tech drilled down to 81 feet with a 12 inch bit to install the 8 inch outer casing. The outer casing was installed by welding the pipes together and then tremie grouting the pipe in place with cement/bentonite grout.			
<b>WORK BEING INSPECTED:</b>			
<b>JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:</b>			
-Daily tailgate H&S meeting topics covered:			
Slips trips and falls: proper PPE (hardhat, safety glasses, steel toe shoes and safety vest): watch out for traffic in the parking lot when walking or moving vehicles and have a fire watch when performing hot work. Also, no smoking, drinking or eating in the exclusion zone is allowed.			

# Daily Status Report (Continued)

PROJECT: Old Roosevelt Field Site

TESTING PERFORMED:
PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:
GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:
COMMUNICATION WITH CONTRACTOR STAFF:
MEETING:
ADDITIONAL ACTIVITIES AND REMARKS:

By: Frank Robinson

Title: Project Geologist



# Daily Status Report

PROJECT: Old Roosevelt Field Site

Date: 5-20-10

Day: 14 (Thursday)

WEATHER: Clear

TEMP: 54/78

WIND: Light from the SW

<b>PERSONNEL ONSITE</b>			
CDM :	Frank Robinson Thomas Mathew		
Uni-Tech:	Butch Hitzelberger, Brad Barnes		
<b>VISITORS</b>			
<b>TIME</b>	<b>NAME</b>	<b>REPRESENTING</b>	<b>REMARKS</b>
<b>EQUIPMENT IN USE:</b>			
-Failing 1500 Drill rig.			
-Tender truck.			
-Support truck.			
-Deere 310E backhoe.			
<b>CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:</b>			
-A tailgate H&S meeting was conducted before the start of work activities. See below for details.			
-The fence around the extraction well area that fell down was repaired by National Fence.			
-At MW-03I, Uni-Tech drilled an 8 inch borehole down to 322 feet using mud rotary. The monitoring well was installed with 10 feet of 4 inch 10 slot stainless steel screen with a 5 foot sump and 4 inch stainless steel riser pipe to grade. The screen was set from 304-314 feet and the sump was set from 314-319 feet. The #1 gravel pack was set from 285-320 feet, the #00/bentonite slurry was set from 280-285 feet and the cement/bentonite grout was started and will be finished tomorrow. The gravel pack, slurry and grout were all installed with a tremie pipe.			
<b>WORK BEING INSPECTED:</b>			
<b>JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:</b>			
-Daily tailgate H&S meeting topics covered: Slips trips and falls: proper PPE (hardhat, safety glasses, steel toe shoes and safety vest): watch out for traffic in the parking lot when walking or moving vehicles and have a fire watch when performing hot work. Also, no smoking, drinking or eating in the exclusion zone is allowed.			

# Daily Status Report (Continued)

PROJECT: Old Roosevelt Field Site

<b>TESTING PERFORMED:</b>
<b>PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:</b>
<b>GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:</b>
<b>COMMUNICATION WITH CONTRACTOR STAFF:</b>
<b>MEETING:</b>
<b>ADDITIONAL ACTIVITIES AND REMARKS:</b>

By: Frank Robinson

Title: Project Geologist

# Daily Status Report

PROJECT: Old Roosevelt Field Site

Date: 5-21-10

Day: 15 (Friday)

WEATHER: Clear

TEMP: 60/82

WIND: Light from the NE

<b>PERSONNEL ONSITE</b>			
CDM : Frank Robinson			
Uni-Tech: Butch Hitzelberger, Brad Barnes			
<b>VISITORS</b>			
<b>TIME</b>	<b>NAME</b>	<b>REPRESENTING</b>	<b>REMARKS</b>
1030-1100	Michael Flaherty	Nassau Co. DPW	Update on project.
<b>EQUIPMENT IN USE:</b>			
-Failing 1500 Drill rig.			
-Tender truck.			
-Support truck.			
-Deere 310E backhoe.			
<b>CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:</b>			
-A tailgate H&S meeting was conducted before the start of work activities. See below for details.			
-At MW-03I, Uni-Tech completed grouting from grade to 120 feet by tremie pipe using cement/bentonite grout.			
-Uni-Tech decontaminated the drill rig and all associated equipment used at MW-03S and 03I using a pressure washer steam cleaner.			
-Michael Flaherty (NCDPW) was on site to get an update on the project.			
<b>WORK BEING INSPECTED:</b>			
<b>JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:</b>			
-Daily tailgate H&S meeting topics covered:			
Slips trips and falls: proper PPE (hardhat, safety glasses, steel toe shoes and safety vest): watch out for traffic in the parking lot when walking or moving vehicles and have a fire watch when performing hot work. Also, no smoking, drinking or eating in the exclusion zone is allowed.			

# Daily Status Report (Continued)

PROJECT: Old Roosevelt Field Site

<b>TESTING PERFORMED:</b>
<b>PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:</b>
<b>GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:</b>
<b>COMMUNICATION WITH CONTRACTOR STAFF:</b>
<b>MEETING:</b>
<b>ADDITIONAL ACTIVITIES AND REMARKS:</b>

By: Frank Robinson

Title: Project Geologist

# Daily Status Report

PROJECT: Old Roosevelt Field Site

Date: 5-24-10

Day: 16 (Monday)

WEATHER: Overcast/drizzle

TEMP: 60/71

WIND: Light from the NE

<b>PERSONNEL ONSITE</b>			
CDM : Frank Robinson			
Uni-Tech: Butch Hitzelberger, Brad Barnes, Keith Doran			
<b>VISITORS</b>			
<b>TIME</b>	<b>NAME</b>	<b>REPRESENTING</b>	<b>REMARKS</b>
<b>EQUIPMENT IN USE:</b>			
-Failing 1500 Drill rig.			
-Tender truck.			
-Support truck.			
-Deere 310E backhoe.			
<b>CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:</b>			
-A tailgate H&S meeting was conducted before the start of work activities. See below for details.			
-FCI delivered a 20 cy roll off for soil cuttings at the MW-02 cluster.			
-Uni-Tech set up on MW-02D when Mall management told us to stop work until the fence was installed and some paperwork was resolved, including insurance. Work at MW-02D is scheduled to resume on Wednesday.			
-National Fence was called to cancel the installation of the temporary fence around the MW-02 cluster (see above).			
-Uni-Tech performed the following work: pumped off the water from the two roll offs, prepped the 8 inch outer casing pipe and performed maintenance on the drill rig.			
<b>WORK BEING INSPECTED:</b>			

# Daily Status Report (Continued)

PROJECT: Old Roosevelt Field Site

**JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:**

-Daily tailgate H&S meeting topics covered:

Slips trips and falls: proper PPE (hardhat, safety glasses, steel toe shoes and safety vest): watch out for traffic in the parking lot when walking or moving vehicles and have a fire watch when performing hot work. Also, no smoking, drinking or eating in the exclusion zone is allowed.

**TESTING PERFORMED:****PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:****GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:****COMMUNICATION WITH CONTRACTOR STAFF:****MEETING:****ADDITIONAL ACTIVITIES AND REMARKS:**

By: Frank Robinson

Title: Project Geologist

# Daily Status Report

PROJECT: Old Roosevelt Field Site

Date: 5-25-10

Day: 17 (Tuesday)

WEATHER: Clear

TEMP: 56/78

WIND: Light from the SE

<b>PERSONNEL ONSITE</b>			
CDM : Frank Robinson			
Uni-Tech: Butch Hitzelberger, Brad Barnes, Keith Doran			
<b>VISITORS</b>			
<b>TIME</b>	<b>NAME</b>	<b>REPRESENTING</b>	<b>REMARKS</b>
<b>EQUIPMENT IN USE:</b>			
-Failing 1500 Drill rig.			
-Tender truck.			
-Support truck.			
-Deere 310E backhoe.			
<b>CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:</b>			
-A tailgate H&S meeting was conducted before the start of work activities. See below for details.			
-At MW-03S and MW-03I Uni-Tech performed the initial development using the airlift swab method. Both wells will be completely developed using a submersible pump at later date. Approximately 3,200 gallons was pumped out of MW-03S and approximately 2,600 gallons was pumped out of MW-03I. Both wells were sand free at the conclusion of the pumping. All water was transferred to the Frac tank in the temporary water treatment area.			
<b>WORK BEING INSPECTED:</b>			
<b>JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:</b>			
-Daily tailgate H&S meeting topics covered:			
Slips trips and falls: proper PPE (hardhat, safety glasses, steel toe shoes and safety vest): watch out for traffic in the parking lot when walking or moving vehicles and have a fire watch when performing hot work. Also, no smoking, drinking or eating in the exclusion zone is allowed.			

# Daily Status Report (Continued)

PROJECT: Old Roosevelt Field Site

**TESTING PERFORMED:** Alignment testing of MW-03S and MW-03I were completed successfully. The test was done using a 20 foot pipe with a disk at each end with a diameter 0.5" smaller than the ID of the well riser pipe. The ID of the well riser pipe is 4 1/8" and the disk's diameter is 3 5/8".

**PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:**

**GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:**

**COMMUNICATION WITH CONTRACTOR STAFF:**

**MEETING:**

**ADDITIONAL ACTIVITIES AND REMARKS:**

By: Frank Robinson

Title: Project Geologist



# Daily Status Report

PROJECT: Old Roosevelt Field Site

Date: 5-26-10

Day: 18 (Wednesday)

WEATHER: Hazy

TEMP: 62/94

WIND: Light from the NE

<b>PERSONNEL ONSITE</b>			
CDM :	Frank Robinson		
Uni-Tech:	Butch Hitzelberger, Brad Barnes, Keith Doran		
Intex:	Todd Daniel, Keith Fitzgerald, Joe Kmiecik		
<b>VISITORS</b>			
<b>TIME</b>	<b>NAME</b>	<b>REPRESENTING</b>	<b>REMARKS</b>
<b>EQUIPMENT IN USE:</b>			
-Failing 1500 Drill rig.			
-Tender truck.			
-Support truck.			
-Deere 310E backhoe.			
<b>CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:</b>			
-A tailgate H&S meeting was conducted before the start of work activities. See below for details.			
-National Fence installed the temporary fence at the MW-02 cluster.			
-Intex installed the 6 inch effluent pipe from the temporary water treatment facility to 30 feet short of the Nassau County storm drain near Clinton Road. The rest of the pipe will be installed when they are ready to discharge treated water to the storm drain.			
-Uni-tech set up on the drill rig at MW-02S, then drilled down to 80 feet with a 12 inch bit. The 8 inch carbon steel outer casing was then installed from grade to 80 feet, welding each section together. The 8 inch outer casing was then tremie grouted in place using a cement/bentonite grout.			
<b>WORK BEING INSPECTED:</b>			
<b>JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:</b>			
-Daily tailgate H&S meeting topics covered:			
Slips trips and falls: proper PPE (hardhat, safety glasses, steel toe shoes and safety vest): watch out for traffic in the parking lot when walking or moving vehicles and have a fire watch when performing hot work. Also, no smoking, drinking or eating in the exclusion zone is allowed.			

# Daily Status Report (Continued)

PROJECT: Old Roosevelt Field Site

<b>TESTING PERFORMED:</b>
<b>PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:</b>
<b>GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:</b>
<b>COMMUNICATION WITH CONTRACTOR STAFF:</b>
<b>MEETING:</b>
<b>ADDITIONAL ACTIVITIES AND REMARKS:</b>

By: Frank Robinson

Title: Project Geologist

# Daily Status Report

PROJECT: Old Roosevelt Field Site

Date: 5-27-10

Day: 19 (Thursday)

WEATHER: Overcast

TEMP: 68/73

WIND: Light from the SE

<b>PERSONNEL ONSITE</b>			
CDM :	Frank Robinson, Thomas Matthew		
Uni-Tech:	Butch Hitzelberger, Brad Barnes, Keith Doran		
Intex:	Todd Daniel, Keith Fitzgerald		
<b>VISITORS</b>			
<b>TIME</b>	<b>NAME</b>	<b>REPRESENTING</b>	<b>REMARKS</b>
<b>EQUIPMENT IN USE:</b>			
-Failing 1500 Drill rig.			
-Tender truck.			
-Support truck.			
-Deere 310E backhoe.			
<b>CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:</b>			
-A tailgate H&S meeting was conducted before the start of work activities. See below for details.			
-Intex performed leak test of the temporary treatment system by using well development water stored in the influent tank (First Frac Tank). The treated water was stored into the effluent tank (Second Frac Tank). There was a small leak in one of the bag filters, which was fixed by replacing the gasket.			
-Uni-Tech drilled down to 255 feet at MW-02S using mud rotary. MW-02S was installed with 10 feet of 4 inch stainless steel 10 slot screen that was set from 236-246 feet with a 5 foot sump set from 246-251 feet. The #1 gravel pack was installed from 230-251 feet, the #00/bentonite slurry was installed from 225-230 feet and the cement/bentonite grout was installed from grade to 225 feet, all being tremied in place.			
<b>WORK BEING INSPECTED:</b>			
<b>JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:</b>			
-Daily tailgate H&S meeting topics covered: Slips trips and falls: proper PPE (hardhat, safety glasses, steel toe shoes and safety vest): watch out for traffic in the parking lot when walking or moving vehicles and have a fire watch when performing hot work. Also, no smoking, drinking or eating in the exclusion zone is allowed.			

# Daily Status Report (Continued)

PROJECT: Old Roosevelt Field Site

TESTING PERFORMED:
PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:
GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:
COMMUNICATION WITH CONTRACTOR STAFF:
MEETING:
ADDITIONAL ACTIVITIES AND REMARKS:

By: Frank Robinson

Title: Project Geologist

# Daily Status Report

PROJECT: Old Roosevelt Field Site

Date: 5-28-10

Day: 20 (Friday)

WEATHER: Overcast

TEMP: 58/73

WIND: Light from the SE

<b>PERSONNEL ONSITE</b>			
CDM : Frank Robinson			
Uni-Tech: Butch Hitzelberger, Brad Barnes, Keith Doran			
<b>VISITORS</b>			
<b>TIME</b>	<b>NAME</b>	<b>REPRESENTING</b>	<b>REMARKS</b>
<b>EQUIPMENT IN USE:</b>			
-Failing 1500 Drill rig.			
-Tender truck.			
-Support truck.			
-Deere 310E backhoe.			
<b>CONSTRUCTION ACTIVITIES COMPLETED AND/OR IN PROGRESS:</b>			
-A tailgate H&S meeting was conducted before the start of work activities. See below for details.			
-At MW-02S, Uni-Tech topped off the grout using cement/bentonite grout by tremie pipe.			
-Uni-Tech jack hammered open the location at MW-03I, then moved the drill rig off of MW-02S and moved to and set up on MW-02I.			
<b>WORK BEING INSPECTED:</b>			
<b>JOB SAFETY. INDICATE WHAT WAS CHECKED, RESULTS, AND CORRECTIVE ACTIONS TAKEN:</b>			
-Daily tailgate H&S meeting topics covered: Slips trips and falls: proper PPE (hardhat, safety glasses, steel toe shoes and safety vest): watch out for traffic in the parking lot when walking or moving vehicles and have a fire watch when performing hot work. Also, no smoking, drinking or eating in the exclusion zone is allowed.			

# Daily Status Report (Continued)

PROJECT: Old Roosevelt Field Site

<b>TESTING PERFORMED:</b>
<b>PROBLEM/DELAYS/CORRECTIVE ACTION TO BE TAKEN:</b>
<b>GREEN REMEDIATION PRACTICES IMPLEMENTED AND QUANTITIES TRACKED:</b>
<b>COMMUNICATION WITH CONTRACTOR STAFF:</b>
<b>MEETING:</b>
<b>ADDITIONAL ACTIVITIES AND REMARKS:</b>

By: Frank Robinson

Title: Project Geologist

**ATTACHMENT 2**  
**FIELD LOGBOOK NOTES**



1000- Split the samples and completed  
Chain of Custody form. The samples  
that are going to the lab are:

215-217	290-292	360-362
225-227	295-297	370-372
230-232	310-312	380-382
235-237	315-317	390-392
245-247	325-327	400-402
260-262	330-332	405-407
270-272	340-342	410-412
280-282	350-352	60-62
285-287	355-357	440-442

a total of 27 samples

1030- Setting up portable mud pit on MW-35

1045- Starting to run

1115- Uni-Tech leaving the site

1145- Leaving the site

5/14/10

John R

0635- F. Elbium on site  
Party Cloudy 57° Winds Calm  
0705- Uni-Tech on site  
Batch H + Brad B.  
0715- Tailgate H&S meeting  
0725- Calibrated both Minire 3000 +  
VRae Successfully. See Calibration sheet  
for details  
0730- Mixing up drilling mud at MW-035  
0740- Starting to drill 8" pilot hole to 80'  
then 12" borehole to set 8" surface casing  
0750- Have to rebuild the drill rig's mud  
pump, was giving them problems last  
week and have the parts to  
rebuild it with them  
0915- LI Analytic Laboratory on site (Chris Onite)  
to drop off bottles for TOC analysis  
0930- Filled up bottles w/ samples gone last  
as gram size except for 60-62  
and 140-142, no sample left for  
those 2 intervals. So collected  
80-82 and 150-152  
1005- LI Analytic leaving the site with  
the samples.  
JR 5/17/10



OKF

EALCRA

MW-035

5/17/10

1200 - Mud pump operational  
 1215 - Down to 40' with 8" p.i.t. hole  
 1251 - Down to 40' with 12" bit  
 1350 - Down to 60' w/ 12" bit  
 6 and 0-20' + 55'  
 1445 - Down to 80' w/ 12" borehole  
 prepping 8" carbon steel surface casing  
 1540 - Welded 2 ft 2 section of 8" pipe by the  
 1600 - welding 3 & 4 section of pipe  
 together.

1615 - Outer casing set @ 80'

1640 - Setting frame pipe

1655 - Setting &amp; graft (bentank / cement)

8" outer casing pipe

1735 - Finish grading to grade outer casing

Starting to clean up

1755 - leaving the site

5/17/10

Friedrich

OKF

EALCRA

MW-035

5/18/10

0635 - E. Robinson on site  
 Light Rain SG  
 0645 - Uni-Tek on site  
 Bels H. & Brad B.  
 0650 - Tailgate H&S meeting  
 0700 - Call start but Mini-Roc 3000 + VRoe  
 successfully. See call start sheet for details  
 0750 - Cutty outer casing down to site  
 0900 - Had to turn the drill bit down  
 was 8" and would not fit in the 8"  
 outer casing  
 0920 - Drilled down to 80' (bottom of outer casing)  
 and mixing drilling mud (Oat-Gel)  
 0940 - Raining heavy now  
 1000 - Drilling down from 80' to 219' (bottom  
 of dump) @ MW-035  
 1040 - Down to 100' @ 120'  
 1205 - Down to 200'  
 1250 - Down to 252' (overdrilled by 3')  
 1301 - Turning drilling mud  
 1300 - Rollings drill rods out of the borehole  
 1315 - All rods out of the borehole  
 1355 - Starting to install MW-035  
 16' 4" 105/10 stainless steel screen w/ 5' sup  
 at 5/18/10

ORF

RA/EPA

MW-035

- 1355 (cont) and 4" Stumboo steel river pipe + grade  
 1435- Well screen/river set: screen set at 234'-244' S'sump bottom at 249'  
 1450- Installing traverse pipe to place gravel pack (#1 gravel)  
 1525- Finished installing traverse pipe  
 1610- Starting to install #1 gravel pack by traverse pack pipe.  
 1630- #1 Gravel 226'-249'  
 1645- Bentonite/#00 sand slurry 220'-226'  
 1650- Starting to grout (cement/bentonite) by traverse pipe.  
 1745- Finished grouting, will top off tomorrow  
 1810- leaving the site

5/18/10

Fitz

ORF

RA/EPA

MW-035 / MW-031

- 0635- F. Robinson  
 51° Drizzle  
 0650- Uni-Tech on site  
 Dutch H. + B. Barnes

- On the way saw that the extraction area fence fell down again (inward) along the roadway side.  
 0655- Tailgate H&S meeting  
 0700- At Extraction well location: both sides fell down. 12 panel studs broken on asphalt side + 9 broken on grass side  
 0715- Calibrated both instruments, Miracase 3000 + Valve successfully, see oil sheets for details  
 0725- Cutting down SS casing on MW-035  
 0750- Moved rig up to MW-031 location.  
 0805- Jackhammering out asphalt @ MW-031 location  
 0830- Called Gene S. (Seacoast): deliver a 20 yd<sup>3</sup> roll off Man. morning (5/24/10) for use at the MW-2 cluster.  
 0900- Starting to drill 8" pilot hole for surface casing to 80'.  
 0940- Down to 40', a lot of gravel  
 1100- Down to 80', pulling rods  
 1125- Down to 17' w/ 12" bit.  
 JRE 5/13/10

5/18/10

5/19/10

5/19/10

ORF

PA/EPA

MW-03I

1300. At road up, drilled down to 81'  
1315. Welding lifting tabs on 8" outer casing  
and filling tank w/center  
1400. Lowering 1st section of 8" outer casing  
into MW-03I borehole  
1410. Welding 1st 2 sections together  
1420. Welding 2nd to 3rd sections together  
1435. Welding 3 to 4th sections together  
1440. 2" outer casing bottom set @ 80'  
1500. Tensile grating 8" outer casing in place  
using Cement/densite grout  
1510. Finished grating 8" casing in place  
1600. Taped off grout at MW-035  
1670. Leaving the site

5/11/10  
Furbish

ORF

PA/EPA

MW-03I

0635. E. Robinson on site  
56" Deep Casing  
0640. Uni-Tech on site  
Bates H. + B. Barnes  
0650. Tailgate H&S meeting  
0700. Cutting 8" outer casing down to site  
0735. Trimming stabilizer so it fits in the  
8" outer casing.  
0835. Start to sand rods down, and mixing and  
using Quik-Gel  
0910. Down to 90' (extra 10' → stabilizer)  
1020. Down to 150'  
1030. Down to 170'  
1045. Thomas Miller (COW) on site  
1200. Down to 270'  
1250. Down to 322'  
1300. T. Mathews leaving the site  
1305. Ripping drilling mud into fracture  
and then drilling mud prior to installing  
MW-03I  
1340. Start to pull rods out of borehole  
1405. Drill bit + stabilizer out of the borehole  
1415. Start to install MW-03I  
15' 4" SS 100ft screen w/ 5' slump

5/20/10

OKF

RA/EPA

MW-3I

1415 (cont) and 4" SS riser pipe to grade  
 1505- Well set: screen 304-314'

8' Sump: 314-319'

1515- Setting tranie pipe

1545- Tranie pipe installed

1550- National Rent a Fence finished  
 repairing damaged fence at extraction  
 well location

1715- Finished #1 gravel packing by tranie  
 ended up high @ 285' checked no bridging  
 and screen covered w/ gravel pack.

1730- Instilling 400/bbl water slurry from 280'-295'

1740- Setting up to start grouting by tranie  
 w/ cement/bentonite grout

1820- Finished grouting for today. will finish  
 tomorrow.

Note: Driller reported some clay in the sump  
 and possibly in the screen zone.

1825- Filling some tranie pipes out.

1845- Leaving the site

5/21/10

Frank M

OKF

RA/EPA

MW-03I

0635- F. Robinson on site

Check 650 winds Cch

0640- Uni-Tech on site

Butch H. + B. Burns

0645- Tailgate HES meeting

0655- Removing some sections of tranie pipe  
 grout ~120' down

0705- Setting up to grout

0830- One of the tranie pipes was clogged  
 had to pull all the pipes out and will be

using 1" poly to tranie grout. Starting to grout

0915- Finished Grouting MW-03I

1005- Moving rig to decom pad

1035- Mike Flaherty (see note 1000)

Hydrogeologist - update on Project

1100- M. Flaherty leaving the site

1105- Uni-Tech leaving the site

1115- Leaving the site

5/21/10

Frank M

ORF

RA/EPH

5/24/10

ORF

RA/EPH

5/24/10

0615 - F. Robinson on site

Overcast 63° wind, moderate from the north

0630 - At MW-02 location setting up

cones + caution tape around location

0730 - Uni-Tech on site

Beth H. Brad Brown, Keith Doran

0740 - Called Michael Kane - here by 1000

0745 - Roll-off on site

0800 - Dukes @ MW-02 location

0805 - Liberty top shows on drill rig

0810 - Moving rig out MW-02S

0820 - Jackhammer out asphalt @ houses

0835 - Mall Management said not to start

working until the fence is up.

0930 - Thomas Matthews (CON) called: mall management

needs additional paperwork, so we can't

get up the fence today. Called Michael

left message w/ Chris about change

in plans

1050 - Moving rig + tender back to staging area

left roll off w/ safety cones around it

1110 - Cleaning out 500 gal oily tank

1145 - Pumping off roll off in staging area and

poopering 8" after casing pipe

5/24/10

5/24/10  
Frank

1230 - Index delivery more 4" stake steel

also pipe for MW.

1250 - Going to extract well core to

pump off roll-off there

1300 - spoke + Thomas Matthews: only need

alignment for MW, don't need

alignment test. Also, mall mgmt. need

insurance, may not get till tomorrow.

1345 - Mixing cement/bearings great to go

off MW-030

1440 - leaving the site

ORF

RA/EPH

MW-035 + 3F Dev.

0625- At Woodbury office picking up development instrument

0650- At ORF site

Clear 64" wind, calm

0700- Uni-Tech on site

Dutch K. Kneibler, Brad Benn, Keith Doran

0705- Tailgate HES meeting

0725- Static well level:

MW-035 = 21.2'

0730- Setting up drill rig on MW-025 to start development using airlift swabs

0755- Lowering 2" pipe for airlift swabs.

0805- Spike w/ R.S. Swabs (Went. Kence) Kence will be here 0700 Wed. (tomorrow)

0910- Starting to air swabs MW-035

0955- Pumped ~ 1,000 gallons

1010- Stopped @ 1,000 gal. moving to treat water to frac tank at temp treatment area

1050- Starting to pump again

1120- At bottom of swab - touching bottom

swab clear. Pumping ~ 50 GPM

1130- Stopped pumping drawdown MW = 47.8'

Pumped ~ 1,600 gal = 3,200 gal total

from MW-035

5/25/10

Time

5/25/10

ORF

RA/EPH

MW-035 + 3I

135- Bring dev. work to temp. treatment facility frac tank.

1200- Lewis + go to Woodbury office to Lane instrument picked up this morning which didn't work. Fine will swap out.

1315- Back at site, mand to MW-03I

for airlift pumping development setting pipe

1330- Pipe at bottom of swab, hit metal swab

Clear

1355- MW-03I static = 13.9'

MW-035 static = 21.3'

1350- Starting to develop MW-03I by air lift.

1410- Pumping ~ 30 GPM

1500- Stopped pumping ~ 1,400 gal. bring water over to temp. water treatment area frac tank

1530- Starting to pump MW-03I again

1555- Thomas M. K. (Cory) informed us

that we can move to the MW-02

cluster tomorrow, have to finish bay

done 11th, pit dug and under solids

1625- finished airlift development

Pumped 1,100 gal + 1,400 gal = 2,500 gal.

5/25/10

FR



OK

RA/ESA

1715. Conducted alignment test on MW-031

successfully.

1720-0700 of MW-031 after daylight: 21.4'

1725. Conducted alignment test on MW-035

successfully.

Alignment test used 2 disks 20' apart  
(2" pipe) that were  $3\frac{5}{8}$ " in dia.

10' of well casing is  $4\frac{1}{8}$ ",  $0.5$ " smaller  
the pipe as in spec.

1735. leaving the site.

Two  
starts

OK

RA/ESA

0600. At Washburn picking up

replant YSI instrument

0625. At MW-02 site

Clear 66° winds light & variable

0635. Uni-Tech on site

Watch Hitzelberger, Brad Bence, Keith Doran

0720-445 tailgate meeting

0730. Called Rob (Nat. Park) crew on its way

0830. Called Rob (Nat. Park) again, crew stuck

in traffic, be here in 20 min, requested

plan for 0700!

0830-1415 on site

0840. Called Gene Switzer (Sacramento) re: collection on

be sampled. Should be at next Tue.

0900. Not fence on site to install temp. fencing

around MW-02 cluster

0900. Fence up, and plywood under roll off

0945. Inter: Todd Daniel, Keith Fitzgerald

Joe Kmiećik

Running 6" effluent piping for temp

water treatment facility to N.C. storm drain

Alleta Rd. / Clinton Rd. / Bell Terrace Rd

0950. Fence up w/ screening

1000. moving sig onto MW-025

1010. 1/2 hr

was

5/26/10

5/25/10

Timothy H

ORF

CA/EPA

MW-025

Wed  
Sticks

- 1100- Finishing jackhammering MW-025  
 1130- Rig mast up  
 1150- Hoisting tender next to drill rig.  
 1230- Starting to drill down w/ 8" bit.  
 1240- Down to 20' w/ 8" bit  
 1320- Down to 60' w/ 8" bit  
 1400- Down to 80' pulling rods to switch over  
 to 12" bit.  
 1425- Drilled down to 75' pulling rods to start  
 over to 12" bit  
 1430- Intex leaving the site, ran pipe from temp  
 treatment facility to 30' short of storm drain.  
 1515- Drilling down w/ 12" bit  
 1610- Down to 60' w/ 12" bit  
 1625- Down to 80' clearing out borchile  
 1650- Pulling drill rods  
 Note: both attempts were calculated successfully  
 this morning. See cal sheets for details  
 1700- Welding 3rd 8" opening  
 1750- Last section laid in: bottom @ 80'  
 1800- Frame pipe installed  
 1810- Frame graving MW-025 w/ bentonite cement grout  
 1855- finished frame graving MW-025 and casing  
 1930- Leaving the site  
 J.D. 5/26/10

Thurs

ORF

CA/EPA

MW-025

5/27/10

- 0630- K. Robinson on site  
 0645- Forecast 71° winds moderate for the rest  
 0645- Calculated minimum 300 + 1100  
 successully - see calibration sheets for details  
 0650- Uni-Tech on site: Butler Hitzelberger  
 Brad Barnes, Keith Brown  
 0655- Tailgate HES meeting  
 0700- Loading up trailer w/ supplies  
 0730- Backhoe + trailer @ MW-02 cluster.  
 0745- Cutting out casing down to size  
 0815- Intex on site: Todd Briel, Keith Fitzgerald  
 0820- Sanding rods down w/ 8" bit  
 0825- Intex will be pumping water for the  
 face tank into the system to see if there  
 are any leaks (leak test)  
 0835- Down to 70' mixing dally mud  
 0850- Down to 90' clearing out borchile of gravel  
 0940- Down to 130'  
 1035- Down to 190'  
 1050- Thomas Mathew (COP) on site  
 1125- Down to 250' will overdrill to 255'  
 1140- Down to 255' turning out mud  
 1305- Starting to pull drill rods out  
 1330- Starting to install MW-025



ORF

CA/EPA

MW-025

Thurs  
5/27/10

1330 (cont) MW-025: Screen: 10' of 4" steel  
10 slot w/ 4" 5' comp. and 4" Stokes  
steel riser pipe to grade.  
1405- MW-025 installed: Sump ~~245-251~~ 246-251  
screen ~~245-246~~ 236-246  
1425- Intex leaving the site. Run water through  
bag filters thru thyls? Carbon racks to  
2nd Phase tank.  
1445- Trans pipe installed  
1455- Starting to install #1 6" hole via trans  
1510- #6 hole 235' - 251'  
1530 #60/bentite slurry 225-230'  
1555- Starting to grout via trans  
Cement bentonite grout  
1655- Finished grouting to grade  
1655- Pulling trans pipe  
1705- All trans pipe out of the ground  
1720- Clearing up  
1730- Leaving the site

5/27/10  
John [signature]

ORF

RA/EPA

MW-025 / MW-021

FR  
5/26/10

0620- K. Robinson on site  
1st Cloudy 60° winds calm  
All fences intact, thunderstorms last  
night.  
0640- Uni-Tech on site. Butch H. - large  
bad knees. Keith Dorn  
0645- T-lyte HOS meeting  
0700- MW-025 grout down 68', will top off.  
0705- bulldozers location for MW-021  
0740- Topping off MW-025 w/ cement/bentite  
grout using trans pipe  
0850- Rig Mast down  
0900- Rig moved to MW-021  
1035- Finished setting up / back at staging area  
1100- Leaving the site

5/27/10  
John [signature]

**ATTACHMENT 3  
BOREHOLE LOG**

# CDM

environmental engineers, scientists,  
planners & management consultants

## WELL CONSTRUCTION SUMMARY

Project: ORF

Client: EPA

Well No: MW-035

### DRILLING SUMMARY

Drilling Co: Uni-Tech

Butch Hitzelberger  
Drillers: Brad Barnes

Drill Rig Make/Model: Failing 1500

Borehole Diameters: 12" / 8"

Drilling Fluid: Quik-Gel

Bits/Depths: 12" to set 80' 8" surface casing / 8" to install well

Total Depth: 252'

Depth to Water: ~25'

Supervisory Geologist: Frank Robinson

### WELL DESIGN

Casing Material: Stainless Steel

Diameter: 4"

Length: 234'

Screen Material: Stainless Steel

Diameter: 4"

Length: 10'

Slot Size: 10

Setting: 234-244'

Filter Material: #1

Setting: 226-249'

Seals Material: Bentonite / #50 slurry

Setting: 220-226'

Grout: Cement / Bentonite

Setting: Grade to 220'

Surface Casing Material: 8" steel

Setting: 0-80'

### TIME LOG

#### Started

#### Completed

Drilling: 5/17/10 0740

5/17/10 1345

Installation: 5/18/10 1355

5/18/10 1745

Development: \_\_\_\_\_

### WELL DEVELOPMENT

Method: \_\_\_\_\_

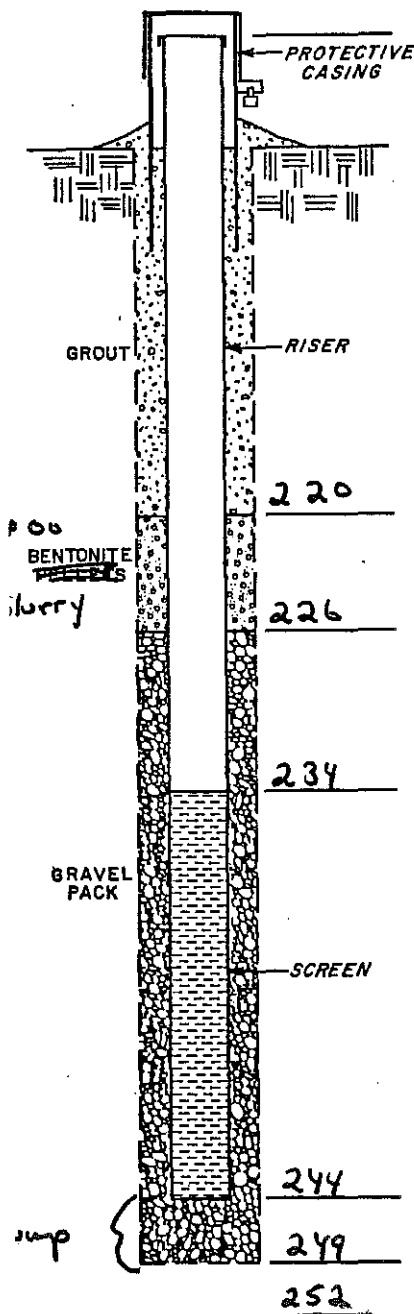
Static Depth to Water: \_\_\_\_\_

Pumping Depth to Water: \_\_\_\_\_

Pumping Rate: \_\_\_\_\_

Specific Capacity: \_\_\_\_\_

Volume Pumped: \_\_\_\_\_



# CDM

environmental engineers, scientists,  
planners & management consultants

## WELL CONSTRUCTION SUMMARY

Project: ORF Client: EPA Well No: MW-03I

### DRILLING SUMMARY

Drilling Co: Uni-Tech Drillers: Butch Hitzelberger  
Drill Rig Make/Model: Fauling 1500  
Borehole Diameters: 12" / 8" Drilling Fluid: Quick-Gel  
Bits/Depths: 12" to set 80' 8" surface casing / 8" to install well  
Total Depth: 322' Depth to Water: ~25'  
Supervisory Geologist: Frank Robinson

### WELL DESIGN

Casing Material: Stainless Steel Diameter: 4" Length: 304'  
Screen Material: Stainless Steel Diameter: 4" Length: 10'  
Slot Size: 10 Setting: 304-314'  
Filter Material: #1 Setting: 285-320'  
Seals Material: Bentonite / #00 slurry Setting: 280-285'  
Grout: Cement / Bentonite Setting: Grade to 280'  
Surface Casing Material: 8" steel Setting: 0-80'

### TIME LOG

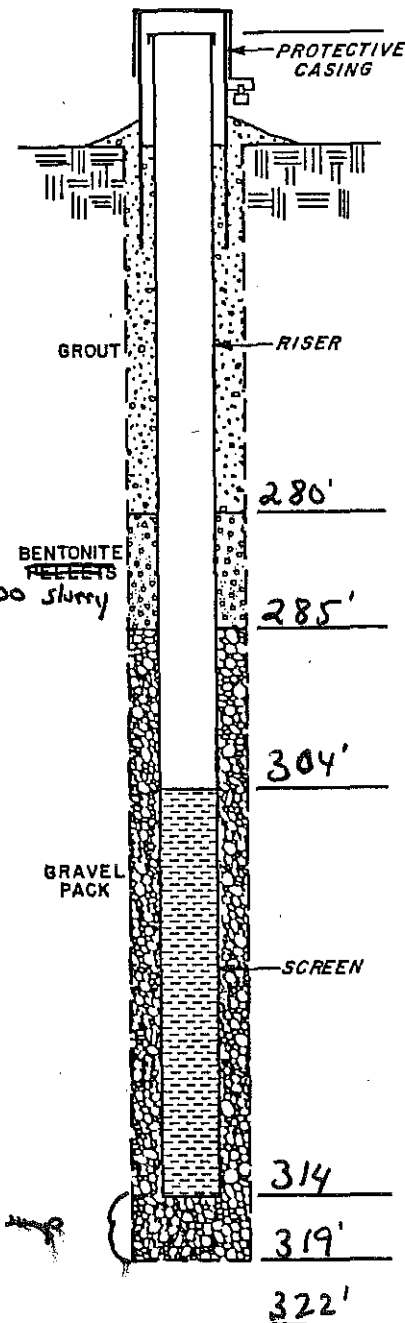
### Started

### Completed

Drilling: 5/19/10 0900 5/20/10 1405  
Installation: 5/20/10 1415 5/21/10 0910  
Development: \_\_\_\_\_

### WELL DEVELOPMENT

Method: \_\_\_\_\_  
Static Depth to Water: \_\_\_\_\_  
Pumping Depth to Water: \_\_\_\_\_  
Pumping Rate: \_\_\_\_\_ Specific Capacity: \_\_\_\_\_  
Volume Pumped: \_\_\_\_\_



Project: ORF Client: EPA Well No: MW-025

## DRILLING SUMMARY

Drilling Co: Uni-Tech Drillers: Butch Hitzelberger  
Brad Barnes  
Keith Doran  
Drill Rig Make/Model: Failing 1500  
Borehole Diameters: 12" / 8" Drilling Fluid: Quik-Gel  
Bits/Depths: 12" to set 80' 8" surface casing / 8" to install well  
Total Depth: 255' Depth to Water: ~ 22'  
Supervisory Geologist: Frank Robinson

## WELL DESIGN

Casing Material: Stainless Steel Diameter: 4" Length: 236'  
Screen Material: Stainless Steel Diameter: 4" Length: 10'  
Slot Size: 10 Setting: 236-246  
Filter Material: #1 Setting: 230-251  
Seals Material: Bentonite / #00 slurry Setting: 225-230  
Grout: Cement / Bentonite Setting: Grade - 225  
Surface Casing Material: 8" steel Setting: 0-80'

## TIME LOG

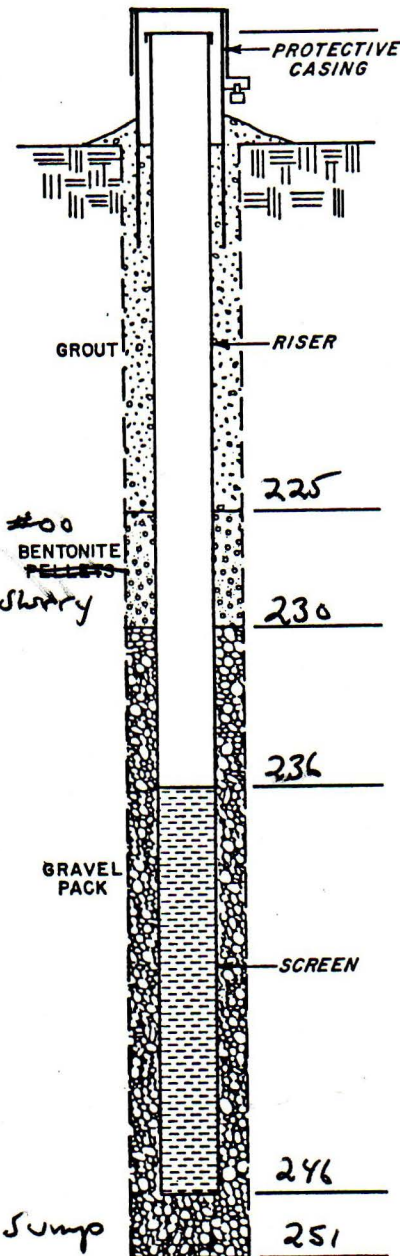
Started

Completed

Drilling:	<u>5/26/10</u>	<u>1230</u>	<u>5/27/10</u>	<u>1140</u>
Installation:	<u>5/27/10</u>	<u>1330</u>	<u>5/27/10</u>	<u>1650</u>
Development:				

## WELL DEVELOPMENT

Method: \_\_\_\_\_  
Static Depth to Water: \_\_\_\_\_  
Pumping Depth to Water: \_\_\_\_\_  
Pumping Rate: \_\_\_\_\_ Specific Capacity: \_\_\_\_\_  
Volume Pumped: \_\_\_\_\_



**ATTACHMENT 4**  
**CHAIN-OF-CUSTODY FORM**

# CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

CLIENT NAME/ADDRESS Uni-Tech 61 Gray Ferry Rd. Franklinville NY 10322		CONTACT: <u>Joan Bear</u> PHONE: <u>856 694 4200</u> FAX: <u>856 694 4242</u>		SAMPLER (SIGNATURE) <u>Frank Robinson</u>		DATE <u>5/12/10</u>		TIME 		SAMPLE(S) SEALED YES / NO <input checked="" type="checkbox"/> YES / <input type="checkbox"/> NO		0051706	
		SAMPLER NAME (PRINT) <u>Frank Robinson</u>		DATE <u>5/12/10</u>		TIME 		CORRECT CONTAINER(S) YES / NO <input checked="" type="checkbox"/> YES / <input type="checkbox"/> NO					
PROJECT LOCATION: <u>Old Roosevelt Field</u>													
TERMS & CONDITIONS: Accounts are payable in full within thirty days, outstanding balances accrue service charges of 1.5% per month. Tendering of samples to LIAL for analytical testing constitutes agreement by buyer/sampler to LIAL's Standard terms										SAMPLES RECEIVED AT <u>3.0 °C</u>		ANALYSIS REQUIRED TOC	
LABORATORY ID # <small>For Laboratory Use Only</small>	MATRIX	TYPE	PH	RES. CHLORINE	PRES.	DATE	TIME	SAMPLE # LOCATION					
1. 51706-01	S	G				5/12/10		ORF TB-01 225-227		X			1
2. 51706-02						5/12/10		ORF TB-01 215-217		X			1
3. 51706-03								ORF TB-01 230-232		X			1
4. 51706-04								ORF TB-01 235-237		X			1
5. 51706-05								ORF TB-01 245-247		X			1
6. 51706-06								ORF TB-01 260-262		X			1
7. 51707-07								ORF TB-01 270-272		X			1
8. 51707-08								ORF TB-01 280-282		X			1
9. 51707-09								ORF TB-01 285-287		X			1
10. 51707-10								ORF TB-01 290-292		X			1
11. 51707-11								ORF TB-01 295-297		X			1
12. 51707-12								ORF TB-01 310-312		X			1
13. 51707-13								ORF TB-01 315-317		X			1
14. 51707-14								ORF TB-01 325-327		X			1
MATRIX: S=SOIL; SL=SLUDGE; DW=DRINKING WATER; A=AIR; W=WIFE; PC=PAINT CHIPS; BM= BULK MATERIAL; O=OIL; WW=WASTE WATER TYPE: G=GRAB; C=COMPOSITE; SS=SPLIT SPOON PRES: (1) ICE; (2) HCL; (3) H <sub>2</sub> SO <sub>4</sub> ; (4) NAOH; (5) Na <sub>2</sub> S <sub>3</sub> O <sub>3</sub> ; (6) HNO <sub>3</sub> ; (7) OTHER						TURNAROUND REQUIRED: <input checked="" type="checkbox"/> NORMAL <input type="checkbox"/> STAT BY <u>1 1</u>		COMMENTS / INSTRUCTIONS <u>Hold results for payment</u>					
RELINQUISHED BY (SIGNATURE) <u>[Signature]</u>		DATE <u>5/17/10</u> TIME <u>9:50 AM</u>		PRINTED NAME <u>Karl Hitzelberger</u>		RECEIVED BY (SIGNATURE) <u>[Signature]</u>		DATE <u>5/17/10</u> TIME <u>9:50 AM</u>		PRINTED NAME <u>Chris Ortiz</u>			
RELINQUISHED BY (SIGNATURE)		DATE TIME		PRINTED NAME		RECEIVED BY SAMPLE CUSTODIAN		DATE TIME		PRINTED NAME			

# CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

CLIENT NAME/ADDRESS <u>Unit Tech</u> <u>61 Greys Ferry Rd</u> <u>Franklinville</u> <u>NC 28322</u>		CONTACT: <u>Joan Bear</u> PHONE: <u>856 694 9200</u> FAX: <u>856 694 9242</u>		SAMPLER (SIGNATURE) <u>Frank M</u> DATE <u>5/12-5/13/10</u> TIME		SAMPLE(S) SEALED <u>YES</u> / NO		L <u>A0051706</u>	
				SAMPLER NAME (PRINT) <u>Frank Robinson</u> DATE TIME		CORRECT CONTAINER(S) <u>YES</u> / NO		(F)	
PROJECT LOCATION: <u>Old Roosevelt Field</u>				SAMPLES RECEIVED AT <u>3.0 °C</u>		ANALYSIS REQUIRED <u>TOC</u>			
TERMS & CONDITIONS: Accounts are payable in full within thirty days, outstanding balances accrue service charges of 1.5% per month. Tendering of samples to LIAL for analytical testing constitutes agreement by buyer/sampler to LIAL's Standard terms.									
LABORATORY ID # <small>For Laboratory Use Only</small>	MATRIX	TYPE	PH	RES. CHLORINE	PRES.	DATE	TIME	SAMPLE # LOCATION	# OF CONTAINERS
1. <u>51701-15</u>	<u>S</u>	<u>G</u>				<u>5/12/10</u>		<u>ORF TB-01 330-332</u>	<u>1</u>
2. <u>51707-16</u>						<u>5/12/10</u>		<u>ORF TB-01 340-342</u>	<u>1</u>
3. <u>51707-17</u>						<u>5/13/10</u>		<u>ORF TB-01 350-352</u>	<u>1</u>
4. <u>51707-18</u>								<u>ORF TB-01 355-357</u>	<u>1</u>
5. <u>51707-19</u>								<u>ORF TB-01 360-362</u>	<u>1</u>
6. <u>51707-20</u>								<u>ORF TB-01 370-372</u>	<u>1</u>
7. <u>51707-21</u>								<u>ORF TB-01 380-382</u>	<u>1</u>
8. <u>51707-22</u>								<u>ORF TB-01 390-392</u>	<u>1</u>
9. <u>51707-23</u>								<u>ORF TB-01 400-402</u>	<u>1</u>
10. <u>51707-24</u>								<u>ORF TB-01 405-407</u>	<u>1</u>
11. <u>51707-25</u>								<u>ORF TB-01 410-412</u>	<u>1</u>
12. <u>51707-26</u>	<u>S</u>	<u>G</u>				<u>5/12/10</u>		<u>ORF TB-01 80-82</u>	<u>1</u>
13. <u>51707-27</u>	<u>S</u>	<u>G</u>				<u>5/12/10</u>		<u>ORF TB-01 150-152</u>	<u>1</u>
14.									

MATRIX: S=SOIL; SL=SLUDGE; DW=DRINKING WATER; A=AIR; W=WPIPE; PC=PAINT CHIPS; BM=BULK MATERIAL; O=OIL; WW=WASTE WATER TYPE: G=GRAB; C=COMPOSITE; SS=SPLIT SPOON PRES: (1) ICE; (2) HCL; (3) H <sub>2</sub> SO <sub>4</sub> ; (4) NaOH; (5) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ; (6) HNO <sub>3</sub> ; (7) OTHER		TURNAROUND REQUIRED: <input checked="" type="checkbox"/> NORMAL <input type="checkbox"/> STAT BY <u>1</u> / <u>1</u>		COMMENTS / INSTRUCTIONS	
--	--	--	--	-------------------------	--

RELINQUISHED BY (SIGNATURE) <u>[Signature]</u>		DATE <u>5/17/10</u>		PRINTED NAME <u>Karl Hitzelberg</u>		RECEIVED BY (SIGNATURE) <u>[Signature]</u>		DATE <u>5/17/10</u>		PRINTED NAME <u>Chris Ortiz</u>	
RELINQUISHED BY (SIGNATURE)		DATE		PRINTED NAME		RECEIVED BY SAMPLE CUSTODIAN		DATE		PRINTED NAME	
		TIME						TIME			



**ATTACHMENT 5**  
**PHOTO LOG**

**PHOTOS 05-17-10**



**P1010027.jpg**

**Drilling at MW-03S using mud rotary.**



**P1010028.jpg**

**Tremie grouting to grade the 8 inch outer casing at MW-03S.**

**PHOTOS 05-18-10**



**P1010029.jpg**

**Installing 10 foot 4 inch stainless steel 10 slot screen and 5 foot sump in MW-03S.**



**P1010030.jpg**

**Installing 4 inch stainless steel well casing in MW-03S.**



**P1010031.jpg**

**Installing #1 gravel pack by tremie pipe in MW-03S.**



## **PHOTOS 05-19-10**



**P1010032.jpg**

**Extraction well area fence that fell over overnight.**



**P1010033.jpg**

**MW-03I location before start of drilling.**



**P1010034.jpg**

**12 inch drill bit that was used to open the borehole to install the 8 inch outer casing.**



**P1010035.jpg**

**Lowering the first section of 8 inch outer casing into the MW-03I borehole.**



## **PHOTOS 05-20-10**



**P1010036.jpg**

**8 inch drill bit and stabilizer used for drilling borehole at MW-03I.**



**P1010037.jpg**

**Installing MW-03I 4 inch stainless steel screen and sump.**



**P1010038.jpg**

**Installing #1 gravel pack with tremie pipe at MW-03I.**



## **PHOTOS 05-21-10**



**P1010039.jpg**

**At MW-03I, completing tremie grouting with cement/bentonite grout.**



**P1010040.jpg**

**Drill rig used at MW-03S and 03I being decontaminated.**

## **PHOTOS 05-24-10**



**P1010041.jpg**

**MW-02D location before drilling.**



**P1010042.jpg**

**Welding lifting lugs on 8 inch outer casing pipe.**



**PHOTOS 05-25-10**



**P1010043.jpg**

**Airlift swab pipe used at bottom of pipes.**



**P1010044.jpg**

**Airlift pumping set up at MW-03S.**



**P1010045.jpg**

**Alignment pipe with disks at ends of 20 foot pipe.**

## **PHOTOS 05-26-10**



**P1010046.jpg**

**Fence and rig set up at MW-02 cluster.**



**P1010047.jpg**

**Uni-Tech drilling at MW-02S.**





**P1010048.jpg**

**6 inch effluent pipe from temporary water treatment facility.**

**PHOTOS 05-27-10**



**P1010049.jpg**

**Inside of MW-02S 10 slot screen.**



**P1010050.jpg**

**Screen and sump being lowered into MW-02S.**

**PHOTOS 05-28-10**



**P1010051.jpg**

**MW-02S location before drilling.**



**P1010052.jpg**

**Drill rig set up at MW-02S.**